

Date: Mon, 11 Jul 94 04:30:17 PDT
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>
Errors-To: Ham-Digital-Errors@UCSD.Edu
Reply-To: Ham-Digital@UCSD.Edu
Precedence: Bulk
Subject: Ham-Digital Digest V94 #227
To: Ham-Digital

Ham-Digital Digest Mon, 11 Jul 94 Volume 94 : Issue 227

Today's Topics:

 44.x subnets
 How is WEFAX encoded for grey scale?
 National Traffic System
 New IP Address when Moving?
 PPP to Internet Over Packet Radio
 tncdr106.zip - TNCDOOR: Run Ham Packet Radio from BBS door
 Troubleshooting Tips Needed

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 11 Jul 1994 05:59:46 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!vixen.cso.uiuc.edu!
newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!news.sibylline.com!eskimo!
rdonnell@network.ucsd.edu
Subject: 44.x subnets
To: ham-digital@ucsd.edu

William Vaughn (vaughnwt@olympus.net) wrote:

: >As I see it, since the 44 network is subdivided (2nd octet) by US state or
: David, What is a 44 network? Where do I get some info? Thanks.
: William Vaughn vaughnwt@olympus.net "Just plain Bill."

The '44 network' refers to the IP address space that is allocated to the
'ampr.org' domain, that one used by amateurs. In other words, internet
protocol addresses of the form '44.x.x.x' where x is a number from 0 to 255,

with certain reservations.

There are national and regional IP address coordinators for the 44 network.

If you're a ham and interested in using TCP/IP networking over amateur radio, let me know where you are located, and I'll try to locate the coordinator for your area and pass the info back to you.

73,

Bob, KD7NM (Amateur Radio IP address coordinator for Western Washington)

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Bob Donnell, kd7nm bob@ethanac.kd7nm.ampr.org rdonnell@eskimo.com

Date: Mon, 11 Jul 1994 00:37:04 GMT
From: world!eac@uunet.uu.net
Subject: How is WEFAX encoded for grey scale?
To: ham-digital@ucsd.edu

In <hamilton.773788184@BIX.com> hamilton@BIX.com (hamilton on BIX) writes:

>What is the actual WEFAX encoding mechanism? Is it analog or digital?

WEFAX is analog. The HF (or FM) system uses the frequency of the signal to determine the greyscale. The Weather Satellite (or AM) system uses the amplitude of a 2400 Hz tone. Sync is at the start by using a signal that alternates between black and white. The chart takes from three to ten minutes to transmit, so frequency stability and accuracy of the sampling clock has to be good. No sync in the HF system during the chart, but I think there is a bar in the Satellite system because there is no start or end.

SSTV (at least the old 8 second B&W) is similar in that the same frequencies are used for the video information (1500 to 2300). Just consider Wefax to be a very slow Hi-Res SSTV signal without the 1200 Hz sync pulses.

73 Eric... WB1HBU eac@world.std.com

Date: Sun, 10 Jul 94 10:51:37 PDT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!udel!news.sprintlink.net!

crash!bssbbs!tmill493@network.ucsd.edu
Subject: National Traffic System
To: ham-digital@ucsd.edu

I posted a message here a couple days back concerning the importance of the National Traffic System, and unfortunately my keyboard is sticking from time to time, and making a few mistakes. Of course I could never make any mistakes, or.....could I? So here goes my message once again, hopefully without the "typos".

Good day ladies and gentlemen. I would like to bring up a subject very important to ham radio. At least I think it is. That being the National Traffic System. For those of you who do not know what the National Traffic System is, it is basically a network in which 3rd party messages can be passed for hams and non-hams alike. In fact, the system needs your help! When was the last time you checked into a voice traffic net? In fact, by reading this, you are telling me that you are interested in digital communications, and may be involved in packet. You too can help in this very valuable service. The next time you check into a "fullservice" bbs, type "LT", and hit your enter key. If there are any traffic messages they will be listed out for you. Are there any messages in your local calling area listed? If there is, why not print them out, pick up your phone and deliver the message to the person so named. After you have copied the message "kill it", so no one else will duplicate your efforts. You might offer to send a message back for them. That is great PR for ham radio!! If you ever have any questions, drop me a note. I will try and answer any questions I can. This form of traffic handling can be great practice for when we really need it. In times of emergencies, such as earthquakes, hurricanes, tornadoes, fires, and well, I think you get the picture. Until next time, 73,
Tuck, KC6ZEC

/s

Date: Mon, 11 Jul 1994 05:14:36 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!vixen.cso.uiuc.edu!
newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!news.sibylline.com!eskimo!
rdonnell@network.ucsd.edu
Subject: New IP Address when Moving?
To: ham-digital@ucsd.edu

Shannon Miller (smiller@intelsun.rus.uni-stuttgart.de) wrote:
: Here's a question for which I can't seem to get a straight answer:

: I got a TCP/IP address allocated to me when I lived in Oregon and

: operated as N7APC. Now I live in Germany and operate as DL6SEU.
: To get on the air with TCP/IP quickly I simply made use of my old
: IP address. The question: -should- I get a "local" (German) IP
: address? In any event I want to keep my original IP address as I
: plan to return to the U.S. someday.

: My Oregon IP address works fine of course, and shouldn't be in use
: by any other station on the planet (since N7APC is off the air as
: long as I'm here!), but one can easily tell that I'm not in the
: same "subnetwork" as the locals.

Hi Shannon,

If you'd moved a couple of hundred miles north, to Western Washington,
you'd definitely need a new address. In this area we are using subnetting
for all routing, so addresses are issued on an lan-by-lan basis. Currently
we use a 24-bit mask, so each subnet has 254 possible users. This is
definitely more than any one lan can support simultaneously, but allows us to
use RIP effectively. Also makes a bit more work for yours truly as the
address coordinator for this area. A bit of dBase programming has eased the
process considerably tho.

The biggest problem we seem to have with the whole subnetting process is
shrinking / breaking up lans that have developed hidden transmitters.

Be aware too that there are a number of gateways to internet, and if your
local lan gets this kind of access, you really can't use just any old IP
address, if you want to make use of any of the routers, etc. They'll send
acks to your connect packets back to the entry in their routing table, and
that probably won't be to your station.

Also, if you have more than one IP address associated with a particular host
name, and all addresses are not active (on the air) at the same time, a
domain lookup to that host name may result in a connect attempt to the
inactive address, so a different host name is generally necessary for each
lan you are on if you are not on all of them at the same time.

: Many thanks,

: --Shannon, DL6SEU/N7APC

Sure thing! 73

--

Bob Donnell, kd7nm bob@ethanac.kd7nm.ampr.org rdonnell@eskimo.com

Date: Mon, 11 Jul 1994 05:34:56 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
vixen.cso.uiuc.edu!newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!news.sibylline.com!eskimo!
rdonnell@network.ucsd.edu
Subject: PPP to Internet Over Packet Radio
To: ham-digital@ucsd.edu

David Greeson (dgreeson@newbridge.com) wrote:

: I was interested in the speed of packet radio (i.e. bits/second) and
: whether anybody was using it to hook into the Internet using a protocol
: like SLIP or PPP (Linux PC). A college friend of mine had a packet radio
: setup and it seemed like a very neat idea, but the data rate was slow.
: That was 10 years ago where everything was slow as compared to today's
: modems. Any improvements?

Most amateur packet activity (99%) is still at 1200 bauds, definitely not a speed demon. In some areas there is 9600 and 19200 baud activity, which isn't bad, and in probably 3-4 areas there are lans running at 56 k or faster.

With AX25 drivers or the amateur TCP/IP packages, PPP over the air is not necessary. Each station has an assigned IP address, either by a coordinator (I'm one) or from a block assigned to a bootp server. The latter is not common yet. At this time some areas have gateways to internet, with varying restrictions depending on abuse and operator sensitivity as to what is acceptable to allow to enter their amateur network from the internet. Unfortunately the FCC has something to say about content of information transfered via amateur radio, and each gateway operator has to come to a decision as to how far out on a thread he wants to hang his amateur license.

With a reliable internet gateway connection, mail and ftp are possible, but tend to suffer because the slow speed and relatively high error/loss rate with radio circuits are not compatible with the expectations of the typical computer on the internet, especially retry and timeout timer adjustments. Unless you are in one of the areas where higher speed operations (greater than 9600/19200) are done, things like Mosaic are not feasible, and the hardware for the higher speeds is not yet available in a plug-and-play form, in fact, it's a loooooonng way from that yet for any speed except perhaps 1200 baud in some circumstances. Still a lot of room for improvement!

Hope that gives a small idea of where amateur packet radio is, compared to typical internet access.

: David Greeson : dgreeson@newbridge.com

--

Bob Donnell, kd7nm bob@ethanac.kd7nm.ampr.org rdonnell@eskimo.com

Date: 11 Jul 1994 04:21:30 GMT
From: juniper.almaden.ibm.com!enge.almaden.ibm.com!enge@uunet.uu.net
Subject: tncdr106.zip - TNCDOOR: Run Ham Packet Radio from BBS door
To: ham-digital@ucsd.edu

Note that the rules would also require that the user possess a license
or that the SYSOP be in attendance and monitor the transmissions.

Roy, AA4RE
enge@almaden.ibm.com

Date: Mon, 11 Jul 1994 05:51:09 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!vixen.cso.uiuc.edu!
newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!news.sibylline.com!eskimo!
rdonnell@network.ucsd.edu
Subject: Troubleshooting Tips Needed
To: ham-digital@ucsd.edu

James Meade (jnmeade@blue.weeg.uiowa.edu) wrote:
: I'm trying to get some equipment together and am getting pretty
: frustrated. I need some help in good troubleshooting techniques, or
: tips on what I might be overlooking.

As a former customer service rep for one of the TNC makers, the most common
setup problem of a beginner I observed was that the transmit audio level
from the modem to the radio was set incorrectly. The best way to set this
is with a deviation meter. Make sure the radio's deviation limiter is set
to limit deviation at 5 kHz, then adjust the output level of the modem to
drive the radio to 2.5-3.5 kHz of deviation. The high tone (2200 Hz) should
be set to 3.5 kHz, and with the normal pre-emphasis in the radio, this will
usually result in the low tone (1200 Hz) deviating the radio about 2.5 kHz.
When in doubt, use a lower level rather than a higher level - most modems
have trouble with distorted audio.

If you have to set the TX level without a deviation meter, monitor your signal with another receiver (scanner, HT, or whatever) and if possible use a scope to look at the receiver's audio. Note how loud other stations on the channel are, and set yours a little lower - as I said, the most common setup error is too much TX audio.

Hope that helps.

: Jim - Farmer - Iowa City, IA,

Bob, KD7NM - near Seattle, WA

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Bob Donnell, kd7nm bob@ethanac.kd7nm.ampr.org rdonnell@eskimo.com

Date: 10 Jul 1994 17:24:11 GMT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!vixen.cso.uiuc.edu!
newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!hobbes.physics.uiowa.edu!news.uiowa.edu!
icaen!drenze@network.ucsd.edu
To: ham-digital@ucsd.edu

References <gTP6oc1w165w@bssbbs.com>, <eJn7kexGLXs0067yn@cris.com>,
<2vnt9m\$9va@network.ucsd.edu>ws
Subject : Re: NTS traffic

brian@nothing.ucsd.edu (Brian Kantor) writes:

>The NTS is an obsolete system for transferring small bits of information
>in an inefficient way. It is primarily of interest to old-time hams.
>When the best method of communication was hand-sent Morse, the NTS had
>a reason to exist. It no longer does.

>In today's environment of cellular telephones, trunked radio systems
>with data screens, and nearly universal deployment of FAX machines,
>the NTS people could best serve their community by staying out of the
>way of real emergency personnel doing their jobs.

Not true, Brian! Unfortunately, many of these systems are extremely limited in ways that hurt more than the limitations of NTS. To begin with, there are only a limited number of cellular communications channels available in any given locale. While this number is very high, just remember that many, *many* people have access to cellular communications...which are going to turn into primary forms of communications when the regular phone circuits go out. I believe it was

in the last large Cali quake that this limitation was truly noticed. The media saturated the area. Unfortunately, each and every member of the media had a cellfone and a deadline to make. As I recall, the cellular circuits still in service were so saturated that vital emergency traffic simply could *not* get through!

Another problem with the use of cellular communications and FAX machines is what to do when the power goes down. Unfortunately, many of these deployed devices run off of line AC with no provisions for battery backup. Hrm. You lose a large part of the power grid of a major metropolitan city and you lose a large part of your communications network.

Yet another problem with the use of trunked radio systems, etc. is that if civil defense agencies had to own, maintain, and train operators for much of the equipment amateur radio operators bring to the scene, then they'd have to have the funding for them...which would come out of the taxpayers' pockets. You'd hear screaming then!

Contrast this to Amateur Radio. We bring our own equipment to the scene. The people who volunteer for this have generally been trained by ARES or MARS or whomever to respond to such things. We generally stay at specific CCC centers to pass messages, leaving the people who have actually been trained to deal with the emergency to do what they do best...deal with it! While I agree that Joe Ham should stay the heck out of the way, ARES, MARS, and other emergency response groups provide a valuable service, just ask anybody who has worked with them.

There does need to be something of a paradigm shift about how messages are passed, though. Hammering them out in CW doesn't make much sense when you can pass them faster using SSB or packet. Passing them all the way around the country makes little sense when you can pass them to a communications post outside the emergency zone, then get them on to faster means of communication, such as the telephone, Internet, teletype, FAX, or whatever. Rather than eliminating the NTS, it ought to be integrated more fully into the grand scheme of things.

And to whomever was complaining about getting NTS messages returned because of length, why would you send a novel via NTS anyway? I've never come across a message I've wanted to send via NTS that couldn't be expressed in a dozen words or less--usually with one of the ARRL stock messages.

--

Doug Renze, N0YVW * drenze@isca.uiowa.edu * N0YVW @ W0IUQ.ia.usa.na
DRenze@aol.com

Date: Sun, 10 Jul 94 07:07:13 -0800
From: amd!amdahl!grafex.sbay.org!ka6etb@decwrl.dec.com
To: ham-digital@ucsd.edu

References <eJn7kexGLXs0067yn@cris.com>, <gTP6oc1w165w@bssbbs.com>,
<2vnt9m\$9va@network.ucsd.edu>.o
Reply-To : ka6etb@grafex.sbay.org
Subject : Re: NTS traffic

In <2vnt9m\$9va@network.ucsd.edu> brian@nothing.ucsd.edu (Brian Kantor) writes:
>The NTS is an obsolete system for transferring small bits of information
>in an inefficient way. It is primarily of interest to old-time hams.
>When the best method of communication was hand-sent Morse, the NTS had
>a reason to exist. It no longer does.

Most emergency traffic is is small bits of information.

Far more NTS traffic was handled via the PBBS system than via Morse or voice during the Loma Prieta earthquake...by an order of better than 10 to 1.

>In today's environment of cellular telephones, trunked radio systems
>with data screens, and nearly universal deployment of FAX machines,
>the NTS people could best serve their community by staying out of the
>way of real emergency personnel doing their jobs.

Here in Santa Clara County, officials rely on amateur radio communications, primarily RACES and ARES. Perhaps, as you say, there are other "more better" ways of communication, but there is a cost factor. And, it has nothing to do with NTS.

During the earthquake, cell phone in the affected area was down, as I recall. Those things don't work too so terribly good when they are broken. Here in our area, any ham with a hand-held can hit a repeater. Not true, in most areas, I admit.

Where NTS excelled during the earthquake, was the handling of Health & Welfare traffic. For quite a period (2 or 3 days, as I recall), there was no inbound telephone calls allowed. Those folks whose phones worked could call out if they could get an open line. Didn't matter if it was a cell phone or not.

I mentioned in an earlier post that I live three miles from the epicenter of the Loma Prieta quake. We were fortunate in that our power was only off for a few hours, and our telly line never broke. Folks a mile away were without power for days and telly service was intermittent at best.

I was busy for a couple of days handling NTS H&W traffic.

This thread is beginning to stray from digital.misc.

S

End of Ham-Digital Digest V94 #227
